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MANUFACTURING PROCESS PROCEDURE

MPP-120

REV. C

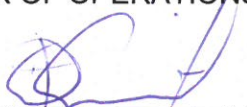
PRODUCT AND COMPONENT IDENTIFICATION MARKING

REFERENCE ONLY

APPROVED BY:



DIRECTOR OF OPERATIONS Date: 10/14/14



DIRECTOR OF QUALITY Date: 9/10/14



DIRECTOR OF ENGINEERING Date: 9.24.14

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Revision	Date	Pages	Description	Approval
NC	12/15/99	All	Initial Release ECN#00313	Committee
A	07/20/04	All	Added General Marking Requirements, Required Information, Methods and Materials and Serialization.	S. Joseph
B	08/06/13	All 3 4 6 8 8	Revised Headers. Revised all section for clarity Added Reference Documents Added Section 3.3 Added Section 4.6.1 Added Section 5.5 Added Section 5.6	D. White
C	07/01/14	All 4 6	Updated all pages to newest format Condensed Section 1-3 into subsections of Section 1.0, Introduction. Consolidated Section 5.3 with 5.7 and placed their contents into a new Section 3.1	D. White



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REFERENCE DOCUMENTS

- A. MIL-I-6903.....Ink, Marking (For Parachutes and Other Textile Items)
- B. 14CFR K21.303....Parts Manufacturer Approval
- C. 14CFR45.....Identification and Registration Marking
- D. 14CFR45 B.....Identification of Aircraft and Related Products
- E. 14CFR45.14.....Identification of Critical Components
- F. 14CFR45.15.....Replacement and Modification Parts
- G. 14CFR45.15.....Marking requirements for PMA article, TSO articles, and Critical
Parts Replacement
- H. ACNO: 43-213.....Parts Marking Identification Date: 11/3/09
- I. MPP-173.....Label Materials
- J. AIP-4.2.4.....Control of Records



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1.0 INTRODUCTION

1.1 Purpose and Scope

This procedure defines the process for required FAA identification/marketing of products and components manufactured by Apical Industries dba Dart Aerospace. Personnel responsible for utilizing this procedure are those in the Production Assembly and Packing departments.

1.2 General Marking Requirements

Applicable parts shall be identified with in accordance with 14CFR45, 45.14, 45.15, 21.303, (a), (b) and applicable engineering drawings requirements. The marking and/or nomenclature will be permanent in accordance with applicable regulatory requirements. When practical, the location of the part number shall permit its being read after assembly in the completed unit. Markings (FAA/PMA, part numbers, serial numbers, revision level, Organization Logo, etc.) shall be located as close together as possible.

NOTE: When there is insufficient room for marking, the components surface integrity has to be maintained or are too small to be marked, a tag/nomenclature shall be affixed to the part or its container.

1.3 Definitions

- 1) FAA Federal Aviation Administration
- 2) PMA Parts Manufacturer Approval
- 3) CFR Code of Federal Regulations
- 4) QA Quality Assurance
- 5) QC Quality Control
- 6) QMS Quality Management System
- 7) DAO Dart Aerospace Oceanside
- 8) P/N Part Number
- 9) Rev. Revision
- 10) A/C Aircraft Model
- 11) S/N Serial Number
- 12) MO Manufacturing Order



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2.0 REQUIRED INFORMATION

The following details the minimum information to be marked on parts produced by Apical Industries dba Dart Aerospace.

2.1 General Parts

Parts will be marked with following minimum required information when there is sufficient area to allow marking:

- 1) FAA/PMA
- 2) Apical Industries
- 3) Logo and/or Name

NOTE: For more information regarding part marking see 14CFR45.15, Subpart B.

2.2 PMA Identification

Parts Manufacturer Approval (PMA) requirements must be marked with the following minimum information when there is sufficient area to allow the marking:

- A. FAA-PMA
- B. Company name and/or logo

2.3 Marking and Nomenclature When Required

When required by the drawing the following information will be marked on the product(s):

- A. Organization's Name
- B. P/N
- C. Rev.
- D. Model A/C eligibility
- E. S/N
- F. Customer Contractual marking and nomenclature requirements

NOTE: The products and assemblies that will most likely require the above marking and nomenclature are but not limited to float kits, cables, hoses, and reservoirs.



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3.0 METHODS AND MATERIALS

The marking of parts shall be accomplished in a manner that will not adversely affect the life or utility of the part. Where identification information is unknown at the time of fabrication, space shall be left for subsequent placement of unknown information.

3.1 Materials

A. Reservoir Label Template

- 1) Reservoir assemblies will use the template and be labeled per drawing 601.3660. The required fields shall be completed on the template with the applicable part and serial number.

B. Ink Media

- 1) The following table identifies the ink color, product, fabric color, application media and media specification to be used:

Table 1: Ink Application

INK COLOR	PRODUCTS	FABRIC COLOR	APPLICATION METHOD	MEDIA SPECIFICATIONS
BLACK RED	Floats Float Covers	Yellow White Silver Grey	Stencil	MIL-I-6903 Diagraph GS-2 Parachute Ink
WHITE RED	Floats Float Covers	Black Silver Grey	Stencil	
YELLOW RED	Floats Float Covers	Black Silver Grey	Stencil	
RED BLACK	Evacuation Slides	Silver Yellow Grey	Stencil	
BLACK RED YELLOW WHITE	Processed Component Parts	Component Body	Stencil or Stamp	
BLACK RED	Documents, Floats and Slides	White, Silver, Yellow	Pen or Stamp	MIL-I-6903 Diagraph GS-2 Parachute Ink Sharpie Ultra-Fine Point
BLACK WHITE RED BLUE YELLOW	Purchased Components	Component or Assembly Surface	Pen or Stamp	



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3.2 Rubber Stamp

Rubber stamp marking is to be permanent to ensure against obliteration or flaking. Illegibility or smearing is to be prevented. If this does occur the stamping shall be reworked so as to be legible, concise, and orderly in appearance. Rubber stamp application will be accomplished with the following media:

- A. Lacquer
- B. Enamel
- C. Epoxy

NOTE: Epoxy inks are the preferred media for most applications due to permanence; however, other conditions may dictate lacquer or enamel.

3.3 Hand Marking

Required information may be applied by hand onto the component's or assembly's surface when required. Markings and nomenclature should be completed in a legible, orderly with a permanent marker and/or device.

3.4 Laser Engraving

Parts may be laser engraved when specified by the corresponding part drawing. Laser engraving is reserved for parts with minimal to no surface finish specifically excluding paint or powder coat finished parts. Bare aluminum or stainless steel components are ideal for laser engraving. The depth of markings shall not exceed 5 percent of the thickness of the part or .005 inch, whichever is less. Markings will be uniform in stroke width with sharply defined edges and, except where the fabrication technique precludes, should have square corners at stroke ends. Markings must be uniformly clear and without distortion, nomenclature and characters shall be upper case. Marking by laser engraving should be done on a flat and properly prepared surface.

3.5 Vibrating Stylus and Carbon Tip Pencil Marking

The depth of markings shall not exceed 5 percent of the thickness of the part or .005 inch, whichever is less. Markings shall be applied prior to the application of protective finishes. Markings will be uniform in stroke width with sharply defined edges and, except where the fabrication technique precludes, should have square corners at stroke ends. Markings must be uniformly clear and without distortion, nomenclature and characters shall be upper case. Use of a vibrating stylus and/or



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carbon Tip Pencil is specifically prohibited on sheet metal and aluminum extrusions.

3.6 Attached Nameplates and Self-Adhesive Tags

When suitable surface space is available and/or engineering drawings dictate, a nameplate or self-adhesive tag may be attached. The nameplates or tags must be manufactured with permanent ink or paint and be securely attached to the assembly (see Table I herein and MPP-173).

3.7 Inspection

Nomenclature, characters, and markings shall be inspected by the applicable drawing, MO, and or customer's requirement(s).

4.0 SERIALIZATION

4.1 Applicability

This section defines the serialization requirements for components, assemblies, or kits. Components, assemblies, and kits shall be individually identified by individual numbers when defined by the Engineering Drawing or dictated by customer requirements. No two (2) items of the same part number are to have the same serial number.

4.2 Format

Serial number convention shall consist of five (5) digits. The first two (2) digits identify the year and the following three digits represent the product's sequential place/identification within the products production stream as shown in the following example:

S/N 13001, 13002, etc.

4.3 Records

Serial number assignments are generated and recorded electronically by the Planning Department and maintained per AIP-4.2.4.

4.4 Relation of Serial Numbers

- A. Serial numbers are independent the model number and the revision letter of the assembly and component. Overhauls and Repairs may have designators hyphenated after the original serial numbers (i.e., -RB, -OH, etc.).
- B. Original serial numbers will not change on articles if they retain the same part number and only be hyphenated as described above for repairs or overhauls.



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4.5 Damaged or Missing Nameplates and Self-Adhesive Tags

When replacing nameplates/tags due to damage or peeling or relocation of the nameplate/tag, the serial number on the old nameplate/tag is to be repeated/transferred onto the new nameplate/tag. At the time of installation of the new nameplate/tag, the old nameplate/tag shall be destroyed.

4.6 Inspection

An inspection of the serial number shall be performed so as to verify that the proper serial number has been assigned when transferring to a new label is required. A hard copy the serial number will be maintained on the MO or repair order's work instruction.